

INTRODUCTION

TO THE

PAWNEE NATIONAL GRASSLAND

HISTORY

This history of the Pawnee National Grassland was researched and prepared by Dorothy and Lee Rhoads, Forest Service Volunteers living near Briggsdale. It provides a good historical background of the settlement of the area and evolution of the National Grassland. Some of the current uses and features of the Pawnee are also discussed. I hope this brief history will help you more fully appreciate this unique resource and landscape called the Pawnee National Grassland.

GRANT GODBOLT
District Ranger

HISTORY

OF THE

PAWNEE NATIONAL GRASSLAND

During the early stages of American expansion, the high plains of northeastern Colorado were prime grazing land for large populations of deer, antelope, elk, and buffalo. The human population consisted of Indians and a few fur trappers Before 1850, a fur trader named Elbridge Gerry settled where Crow Creek joined the South Platte River east of present-day Greeley. In 1861, John Wesley Iliff started his first cow camp on Crow Creek above Gerry's place Union Pacific Railroad announced it would soon be laying rails across southwestern Nebraska. Buffalo were killed by the thousands to feed the railroad construction crews and for their hides, which were in great demand in the East. The buffalo soon became scarce The next year. Iliff established a cow camp approximately 5 miles down Crow Creek from Cheyenne, Wyoming, to provide beef to the railroad crews and also establish a shipping point to the East. In 1868, he bought \$40,000 worth of cattle from Charles Goodnight, who trailed them north from Texas. This established the Goodnight-Loving trail through this area. Goodnight continued trailing herds for Iliff through 1876 By 1877, Iliff's domain stretched from the South Platte River north to the Chalk Bluffs by the Colorado-Wyoming border, and from the mountains east to the present Kansas border He was the biggest cattleman in Colorado.

The Homestead Act of 1862 allowed only 160 acres per homestead, and at least one-quarter (40 acres) of that had to be tilled. Later Acts allowed a total of One of these was the Timber Culture Act, enacted in 1873, allowing the settler to pick up an additional 160 acres by agreeing to plant 2,700 seedlings on 10 acres, of which 675 should be alive and healthy at the time of final proving up. 5 years later. These acts/laws were aimed primarily at land east of and along the west bank of the Mississippi River, and were not appropriate for the high plains. Major John Wesley Powell, an explorer of the West and later director of the United State Geological Survey, wrote a report in 1875, called "Lands of the Arid Region of the U S " He recommended that settlement areas be blocked out in no less than 1,275 acres, giving the settler a reasonable chance of survival He further recommended that without a dependable water supply, it was futile to plow the grasslards The lands should be left in grass, and that plots of less than 2,560 acres would not be successful in this dry area The wisdom of these recommendations was demonstrated in later years

Barbed wire was invented in 1874 and cattlemen were soon using it to enclose public lands for their free and exclusive use. By manipulating the Homestead Act of 1862, Iliff had his cowhands homestead and fence 160 acres at key locations surrounding water. He then purchased the established "homestead" from the cowhands. For example, the earliest record of homestead entry in the Pawnee Buttes area was by Peter Welch in 1887. However, he sold his tract to Iliff 2 years earlier. In 1885, President Grover Cleveland ordered all fences removed from public land. Although it took several years for this to be accomplished, it was the beginning of the end for the big ranchers like Iliff.

By the mid 1880's the homesteaders had begun breaking sod in the grassland country. The railroads encouraged settlers to come west with statements like "the rain-belt has moved westward" and "rain follows the plow". They wanted to attract farmers from the East and Midwest hoping that they would become future freight customers. In 1887, a branch of the Chicago, Burlington & Quincy was built from Kansas through Sterling into Cheyenne.

The bitter winter of 1886-87 brought the loss of thousands of cattle by starvation or freezing to death. At this time Chicago beef prices also took a big drop and the large ranchers went broke. Farmers flocked to the big ranches which were being carved into quarter section (160 acres) homesteads. The dry years of 1889 and 1890 forced many newcomers to leave, and by 1893-94 it was so severe that many of the new towns that had sprung up along the railroad, like Stoneham, Raymer, and Buckingham, virtually dried up. A few settlers survived One of these was Soren Nelson, in 1894 the first actual homesteader to file for his title. He was known as "Pawnee Buttes" Nelson from Texas to Montana

By 1905, to approximately 1910, the rains returned to the grasslands and settlers migrated to the area in even greater numbers. Keota boomed, as did Grover and Briggsdale. Homesteading continued to increase over the next few years and reached its peak between 1914 and 1918. Over 35 percent of the land was plowed, forcing most of the large stockmen out of the area. By this time Iliff had moved on to Texas.

In 1918, Keota's population peaked around 140. All was going well until an influenza epidemic struck and many died. At the same time drought and hail also When farm prices and production dropped, the farmers source of income Those who stayed struggled to keep their land Two attempts were was gone made to save the town and increase its income Mining for kaolinite and oil drilling were to be financed out of Utah, but the deal fell through. Next, the Keota Pioneers Oil and Gas Association was organized and two shares of stock were given for each acre leased for mineral development. Although oil was discovered in 1924, it was too late to save the town. Nature at its worst struck that same year with cloudbursts, deep snows, high winds, tornadoes, hail, and lightning that burned the wheat The Town Site Company put all lots on sale and Keota had seen the last of its prosperous days. Some farmers tried to return their land to grass, but few had much success The period between 1929 and 1937 was a violent time on the plains with rustling, land jumping and even murder.

In the area east of the Rockies, from Texas to Montana, dryland farming became the major economy and large areas were plowed. During wet years, the yield was bountiful and more land came under the plow. With the advent of tractors and combines, even more land could be cultivated. By 1930, about 60 percent of the high plains grassland in Weld County had been plowed up. The big ranches were gone, and dryland farming was the dominate economy.

In the 1930's the drought and winds returned Winds of 50-60 miles an hour became common along the Front Range of the Rockies from Texas to the Canadian border, carrying away the dry topsoil. During two dust storms the sun was almost blotted out in Washington D C, and dust reportedly fell on ships 300 miles out on the Atlantic The farms were literally blown away and this "Dust Bowl" area became a virtual desert. These dry years and low prices again took their toll on farmers. Bankruptcy and tax sales were common and many of the

farmers gave up and moved on, leaving the land to be claimed by creditors and for delinquent taxes. By the mid 1930's, the northeastern Weld County population dwindled from a high of over 600 familes to a low of around 64

During 1933-34, the Federal Government undertook a relief effort through the Work Project Administration (WPA) and the Public Works Administration (PWA) to stabilize the economy However, this only prolonged the agony Emergency funding was soon provided to resettle some of the families The first land was purchased by 1934 and the families relocated on land more conducive to farming Congress passed the "Bankhead-Jones Farm Tenant Act" in 1937, authorizing the Soil Conservation Service to purchase sub-marginal farm land. The same year, the Resettlement Administration was formed in the Department of Agriculture The stated objectives of the new office were "to relocate families, purchase the more severely damaged land, rehabilitate and develop the area, change the use on purchased lands and exert influence on the use of neighboring land, and maintain stability and flexibility of the land" The next 2 years saw the office change hands and names It was the Farm Security Administration, the Land Policy Section of the Agriculture Department, and the Bureau of Agriculture Finally, in 1938 responsibility was given to the Soil Conservation Service where it remained until 1954, when it was transferred to the Forest During the period of 1934-54, most of the present area was acquired through purchase, and in some cases by mutual transfer, (swapping). The acquired land was in many cases, small isolated parcels The "swapping" was done to form more economic and manageable tracts for both the private owner and the Government

The area along Crow Creek near Briggsdale, was the first reclamation and demonstration plot in this area. Seventy acres of meadow improvement began with the construction of two dams and three diversion ditches to spread the flood water over the meadows and provide limited irrigation on other areas Throughout the other acquired areas, existing fences were torn down, moved, or new fences constructed to surround an economically manageable pasture were developed and wells dug Windmills were erected and "catch basins" constructed to collect as much run-off water as possible The policy was "no cow would have to go more than three-quarters of a mile for water". The plowed and denuded lands were planted to mostly crested wheatgrass, an introduced species from Russia which is well adapted to our climate and is palatable to Trees were planted to form wind breaks and provide habitat for livestock Within 2 years, the planted grasses revegetated the plowed areas, and wildlife grazing was allowed on a limited basis

The Crow Valley Grazing Association was formed in 1937 in northwestern Weld County, the next year it changed its name to the Crow Valley Livestock Co-Operative, Inc. The association was composed of the ranchers in the area and the Soil Conservation Service on a cooperative basis. Grazing rules were agreed upon and the association was responsible for their execution. The Soil Conservation Service continued to develop conservation practices, rehabilitate the land, and monitor its use. The Pawnee area in northeastern Weld County was acquired in 1938, and the Pawnee Livestock Co-operative Association was formed in 1941. The next year the name was changed to the Pawnee Cooperative Grazing Association and its organization was patterned after the Crow Valley Association's success.

Formation of the grazing associations, fencing the area into larger tracts, and the use of range riders eliminated the unauthorized use of the public lands by "day herders" (ranchers from outside the area bringing in large herds and badly overgrazing the land—an off—shoot of the open range practice of former years) From the early days of the reclamation process to the present, grazing has shown an increase from practically none to around 9,000 head. The native grasses are slowly replacing the crested wheat and other grasses planted as a conservation measure. The soil blows very little now, but constant watch must be kept to prevent another dust bowl

This was not accomplished without trials, anger, and frustration. Attempts were made to have the land returned to private ownership, but were defeated. The deep-seated individualism of the westerner made it difficult for them to accept a change from the old ways. Successful demonstrations and evident restoration of the land occurred and gradually the new, proven methods of land management were accepted by most of the population, both association members and nonmembers.

The area was transferred from the Soil Conservation Service to the Forest Service in 1954. The Forest Service began managing the area by the multiple-use sustained-yield concept. The Forest Service was given permanent control in 1960, and the "National Grasslands" were formed. The Pawnee National Grassland is one of 19 throughout the Nation: one each in Oregon and Idaho, the rest are scattered from Texas to North Dakota.

In 1960, the Multiple Use-Sustained Yield Act reaffirmed the right to develop mineral resources, primarily oil and gas. The Forest Service specifies the revegetation procedures to be followed by the private operators while conducting their exploration, drilling, and production activities. Currently there are 210 active oil and gas leases (managed by the Bureau of Land Management) on the Pawnee National Grassland. As of June 1986, 21 of these have producing wells on them

There have been 12 Minuteman missile sites constructed on the Grassland These fenced areas (approximately 2 acres each) are administered by the U S Air Force and public access is not permitted

Photographers, birdwatchers, and hikers will find the Pawnee Buttes an interesting landmark. The Buttes are sedimentary rock formations, one-half mile apart, rising 350 feet above the plains to an elevation of 5375 feet. Due to the instability of these sandstone towers, climbing is not recommended.

The cliffs in this area are a preferred nesting area for many birds of prey March through June is their critical breeding and nesting season, and disturbance at this time could cause the eggs to be abandoned. Please remain on the established trail during this critical time. Binoculars are useful while observing these raptors

The Buttes are almost entirely surrounded by private land — The Forest Service owns the West Butte and only a portion of the East Butte — The only public access is the 2 mile foot trail that begins on the top of the escarpment

The Crow Valley Recreation Area, near Briggsdale, was part of one of the first reclamation projects in the area. A ball diamond, picnic area with shelter, fire grates, roads, and rest rooms were constructed, mainly with Work Project

Administration (WPA) labor The town of Briggsdale formed a Park Committee, who contracted with the Resettlement Administration to maintain it in good condition, and to make improvements for a period of 10 years. The contract could be renewed if both parties were agreeable. However, it was renewed only once. In 1959, the community decided it did not wish to continue maintenance of the site, but retained the ball diamond under a Special Use Permit until 1977.

The Forest Service has since developed camp sites, a cooking shelter, a water system, and an education center, constructed with the help of the Daughters of the American Revolution. It was dedicated in 1981 to the memory of Steward J Adams, District Ranger of the Pawnee National Grassland at the time of his death in 1979. The Crow Valley Recreation Area is the only camping facility in this area.

PATTERNS OF PLANT LIFE AT PAWNEE NATIONAL GRASSLAND

BY PAUL MORAN



SCIENTIFIC NAME	COMMON NAME
Abronia fragrans	sand verbena
Agrohordeum macounii	
Agropyron cristatum	crested wheatgrass
Agropyron smithii	western wheatgrass
Agropyron trachycaulum	slender wheatgrass
Allium textile	wild onion
Amaranthus retroflexus	redroot
Ambrosia elatior	ragweed
Ambrosia trifida	giant ragweed
Arenaria hookeri	Hooker sandwort
Argemone intermedia	prickly poppy
Aristida longiseta	red three-awn
Artemisia filifolia	sandsage
Artemisia frigida	fringed sage
Artemisia ludoviciana	prairie sage
Asclepias arenaria	milkweed
Asclepias speciosa	showy milkweed
Astragalus adsurgens	milkvetch
Astragalus bisulcatus	two-groved milkvetch
Astragalus drummondii	Drummond milkvetch
Astragalus gracilis	milkvetch
Astragalus missouriensis	Missouri milkvetch
Astragalus mollisimus	woolly loco
Astragalus sericoleucus	milkvetch
Atriplex canescens	four-winged saltbush
Bahia oppositifolia	plains bahia
Bouteloua curtipendula	side-oats grama
Bouteloua gracilis	blue grama
Brickellia grandiflora	brickellia
Bromus inermis	smooth brome
Bromus japonicus	Japanese chess
Bromus tectorum	cheatgrass
Buchloe dactyloides	buffalo grass
Calamovilfa longifolia	prairie sandreed
Calylophus hartwegii	
Calylophus serrulatus	
Carex eleocharis	
Carex filifolia	threadleaf sedge
Carex praegracilis	•
Ceratoides lanata	
Chara sp	alga
Cheilanthes feei	slender lip fern
Chenopodium dessicatum	goosefoot
Chrysothamnus nauseosus	rabbitbrush

Cirsium arvense	Canada thistle
Cirsium canescens	thistle
Cleome serrulata	Rocky Mt. beeplant
Convolvulus arvensis	bindweed
Conyza canadensis	horseweed
Croton texensis	Texas croton
Cryptentha celosioides	cryptantha
Cryptantha james11	cryptantha
Cryptantha minima	cryptantha
Cucurbita foetidissima	wild gourd
Cymopterus montanum	breadroot
Delphinium geyeri	Geyer larkspur
Delphinium virescens	plains larkspur
Descurainia sophia	flixweed
Distichlis stricta	saltgrass
Dyssodia papposa	fetid marigold
Echinochloa crus-galli	barnyard grass
Elaeagnus angustifolia	Russian olive
Eleocharis acicularis	needle spikesedge
Eleocharis palustris	common spikesedge
Elymus canadensis	Canada wildrye
Epilobium minutum	willow-herb
Erigeron pumilus	low fleabane
Eriogonum alatum	
Eriogonum effusum	winged eriogonum
Eriogonum flavum	bushy eriogonum
Euphorbia geyeri	yellow erlogonum
Euphorbia marginata	Geyer spurge
Euphorbia robusta	snow-on-the-mountain
Euphorbia robusta	Rocky Mountain spurge
Euphorbia serpensFranseria discolor	serpent spurge
Gaura coccinea	bursage
	scarlet gaura
Gaura parviflora	gaura
Grindelia squarrosa	gumweed
Haplopappus acaulis	stemless goldenweed
Harbouria trachypleura	whisk-broom parsley
	pennyroyal
Helianthus annuus	common sunflower
Heterotheca horrida	golden aster
Hymenopappus filifolius	hymenopappas
Hymenoxys acaulis	stemless hymenoxys
Ipomoea leptophylla	bush morning-glory
Ipomopsis laxiflora	gilia
Ipomopsis spicata	spike gilia
Iva axillaris	poverty sumpweed
Iva xanthifolia	rag sumpweed
Juncus balticus	Baltic rush
Juncus compressus	rush
Juniperus scopulorum	Rocky Mountain juniper
Kochia scoparia	kochia
Koeleria cristata	Junegrass

SCIENTIFIC NAME	COMMON NAME
Lactuca scariola	prickly lettuce
Lappula redowskii	stickseed
Lesquerella ludoviciana	silver bladderpod
Leucocrinum montanum	sand lily
Lithospermum incisum	narrow-leaved puccoon
Lygodesmia juncea	rush skeleton plant
Machaeranthera tanacetifolius	tansy-leaved aster
Melilotus alba	white sweetclover
Melilotus officinalis	yellow sweetclover
Mentzelia decapetalia	giant eveningstar
Muhlenbergia asperifolia	alkalı muhly
Musineon divaricatum	musineon
Oenethera albicaulis	prairie
Ocho chora arbroadrio	evening-primrose
Oenethera canescens	pink evening-primrose
Oenethera coronopifolia	cut-leaf
Ochethera Corohopirolia	evening-primrose
Opuntia polyacantha	plains pricklypear
Orobanche fasciculata	broomrape
Oryzopsis hymenoides	Indian ricegrass
Oxybaphus linearis	narrow-leaved
Oxybaphus linearis	umbrellawort
Oxytropis sericea	
Paretaria pennsylvanica	silky loco
Parmelia sp	Pennsylvania pellit
Parmeila sp	lichen
Parthenocissus vitacea	nailwort
Penstemon albidus	thicket creeper
Penstemon angustifolius	white penstemon
Penstemon angustiiolius	narrow-leaved
Petalostemon candidus	penstemon
Phlox hoodii	white prairieclove
Phiox noodli	Hood's phlox
Phyla cuneifolia	fog-fruit
Physalis lobata	purple groundcherry
Physalis virginiana	ground cherry
Plantago asiatica	Asian plantain
Plantago purshii	Pursh's plantain
Poa pratensis	Kentucky bluegrass
Polygonum pennsylvanicum	Pennsylvania knotweed
Polygonum ramossimum	bushy knotweed
Populus deltoides	plains cottonwood
Potamogeton pectinatus	pondweed
Potentilla rivalis	brook cinquefoil
Prunus pennsylvanica	pincherry
Psoralea tenuiflora	slimflower scurfpea
Ranunculus cymbalaria	shore buttercup
Ratibida columnifera	prairie coneflower
Rhus trilobata	squawbush
Ribes aureum	golden currant
Robinia neomexicana	New Mexico locust
Rorippa sinuata	rorippa
	

A MAMMAL CHECKLIST FOR THE PAWNEE NATIONAL GRASSLAND



Scientific Name

Common Name

Order

INSECTIVORA -- Insectivores

Family SORICIDAE -- Shrews

Sorex cinereus Sorex vagrans Sorex nanus Sorex merriami Masked shrew Vagrant shrew Dwarf shrew Merriam's shrew

Order

CHIROPTERA -- Bats

Family VESPERTILLIONIDAE -- Vespertilioned Bats

Myotis lucifugus
Myotis evotis
Myotis thysanodes
Myotis californicus
Myotis subulatus
Lasionycteris noctivagans
Eptesicus fucus

Little brown myotis
Long-eared myotis
Fringed myotis
California myotis
Small-footed myotis
Silver-haired bat
Big brown bat

Order

LAGOMORPHA -- Lagomorphs

Family LEPORIDAE -- Hares and Rabbits

Sylvilagus floridanus Sylvilagus nuttalli Sylvilagus audubonii Lepus townsendii Lepus californicus Eastern cottontail Nuttall's cottontail Desert cottontail White-tailed jack rabbit Black-tailed jack rabbit

Order

RODENTIA -- Rodents

Family SCIURIDAE -- Squirrels

Eutamias minimus
Marmota flaviventris
Spermophilus tridecemlineatus
Cynomys ludovisianuys
Sciurus niger

Least chipmunk Yellow-bellied marmot Thirteen-lined ground squirrel Black-tailed prairie dog Fox squirrel Family GEOMYIDAE -- Pocket gophers

Thomomys talpoides

Northern pocket gopher

Family HETEROMYIDAE -- Heteromyids

Perognthus fasciatus Perognthus flavescens Perognthus flavus Perognthus hispidus Dipodomys ordii Olive-backed pocket mouse Plain pocket mouse Silky pocket mouse Hispid pocket mouse Ord's kangaroo rat

Family CASTORIDAE -- Beavers

Castor canadensis

Beaver

Family CRICETIDAE -- New World Rats & Mice

Reithrodontomys montanus
Reithrodontomys megalotis
Peromyscus maniculatus
Peromyscus difficilis
Onychomys leucogaster
Neotoma mexicana
Neotoma cinerea
Microtus pennsylvanicus
Microtus longicaudus
Microtus ochrogaster
Lagurus cutratus
Ondatra zibethicus

Plains harvest mouse
Western harvest mouse
Deer mouse
Rock mouse
Northern grasshopper mouse
Mexican wood rat
Bushy-tailed wood rat
Meadow vole
Long-tailed vole
Prairie vole
Sagebrush vole
Muskrat

Family MURUDAE -- Old World Rats & Mice

Rattus norvegicus Mus musculus Norway rat House mouse

Family ERETHIZONTIDAE -- New World Porcupines

Erethizon dorsatum

Porcupine

Order CARNIVORA -- Carnivores

Family CANIDAE -- Canids

Canıs latrans Vulpes vulpes Vulpes macrotis Coyote Red fox Kit fox Scientific Name

Common Name

Family PROCYONIDAE -- Procyonids

Procyon lotor

Raccoons

Family MUSTELIDAE -- Mustelids

> Mustela erminea Mustela ferenata Mustela nigripes

Taxidea taxus

Spilogale putorius Mephitis mephitis

Ermine

Long-tailed weasel Black-footed ferret

Badger

Spotted skunk Striped skunk

Family FELIDAE -- Cats

Felis concolor Lynx rufus

Mountain lion

Bobcat

Order

ARTIODACTULA -- Even-toed Ungulates

Family CERVIDAE -- Cervids

> Cervus canadensis Odocolleus hemionus Odocoileus virginiana

Wapiti Mule deer

White-tailed deer

Family ANTILOCAPRIDAE -- Pronghorn

Antilocapra americana

Pronghorn

SHRIKES		FINCHES SPARROWS	F
•	W fc		Field
Northern Shrike Loggerhead Shrike	Sc		Checklist
,	• •		<u> </u>
STARLINGS VIREOS	_		
Starting	R c	Grasshopper Sparrow S	BIRDS
Solitary Vireo Red-eyed Vireo	M r S r	,	· OF
Warbling Vireo	M r	. ,	c
-			· THE
WARBLERS			" PAWNEE
Tennessee Warbler	Мr		
Orange crowned Warbler	M fc	Dark-eyed Junco	MATIONAL
Virginia's Warbler	M fc	(white-winged) W	, GRASSLAND
Yellow Warbler Magnolia Warbler	S c M r	Dark-eyed Junco	1
Yellow-rumped Warbler	en i	(slate-colored) W	u 25°
(Myrtie)	Мc	Dark-eyed Junco (Oregon) W	
Yellow rumped Warbler		Gray-headed Junco W	Comment of the state of the sta
(Audubon s)	M c	Tree Sparrow W	
Townsend's Warbler	u.	Chipping Sparrow S f	
Chestnut sided Warbler	M r M r	Brewer's Sparrow S	
Blackpoll Warbler	Mr	Harris Sparrow M	
Ovenbird	Мr	White-crowned Sparrow W	No the second se
Northern Waterthrush	Мг	Fox Sparrow M	
MacGillivray's Warbler	Mu	Lincoln's Sparrow M	· Life
Common Yellowthroat	S fc i	Song Sparrow R f	•
Yellow-breasted Chat	Su,	McCown's Longspur Si	
— Wilson's Warbler — Canada Warbler	M c M r	Lapland Longspur W f Smith's Longspur M	USDA)IIACY HOCKY
American Redstart	M u	Chestnut-collared Longspur S	" Loiest Corol Wountain
Blackburnian Warbler	Mr	Snow Bunting W	Service Region
WEAVER FINCHES House Sparrow BLACKBIRDS ORIOLES	R,c		•
Bobolink	_		
Western Meadowlark	3 r		The Pawnee National Grassland administered by the Roosevelt National Forest, is located in Weld County
Yellow-headed Blackbird	R c S.fc		northeastern Colorado. This 193 060 acre area of public
Red-winged Blackbird	Rc		land consists of native shortgrass prairie interspersed with some cultivated land
Orchard Oriole	Su		A visitor map of the Grassland is available for Eq. Sic.
Northern Oriole (Baltimore)			You also may want a copy of two birding brochures.
Morthern Oriole (Bullock s)			"Birding Auto Tour ar 1 "Auto Winter Birding Tours
Brewer's Blackbird	Sc		Many people are surprised to learn that the snortgrass prairie supports great numbers of birds of many
Common Grackle Brown-headed Cowbird	S fc	_	species especially during the breeding season
	S c		Compilation of available bird sightings by observe is since 1962 has resulted in a list of 229 species
TANAGERS			We wish to thank Dr. Ronald A. Ryder of Colorado State
Western Tanager	Mir	Service 3	University for compiling this list. Dr. Ryder and Miss Nancy Hurley of the Denver Field. Ornithologists
FINCHES SPARROWS		£ (9.4) \$	collaborated in establishing abundance and seasonal
Rose-breasted Grosbeak	u .	non-	occurrence designations for each species
Black headed Grosbeak	Mir Su	للسر ليدر سرال	Observations of unlisted species of birds on the Grassland should be reported to the District Range
	3 4		Pawnee National Grassland Greeley
FINCHES SPARROWS		多八 M	Colorado 80631 Phone number (303) 353-5004
Blue Grosbeak	ע S	33	•
Pine Grosbeak	W r		Date Time
Lazuli Bunting Dickcissel	S u S r		Total Species
Cassin's Finch	M. L.	LA DAR HI	
House Finch	Rc	I WIND	Observer
Gray crowned Rosy Finch	Wr	M. K.n.	
Black Rosy Finch	Wr		Weather
Common Redpoll	W fc	DALINGE MATTOWN	Common names after Peterson Field Guide to Western Birds (2nd edition 1961)
		DOLLAR DESCRIPTION OF CONTRACT AND	
Pine Siskin	R fc	PAWNEE NATIONAL GRASSLAND	Conforms with AOU Checklist of North American Birds
Pine Siskin American Goldfinch	R fc R c	660 "O" Street, Suite A	(5th edition 1957) a — Abundant
Pine Siskin	R fc	660 "O" Street, Suite A Greeley, CO 80631	(5th edition 1957) a —Abundant c —Common
Pine Siskin American Goldfinch	R fc R c	660 "O" Street, Suite A	(5th edition 1957) a —Abundant

LOONS GREBES		SHOREBIRDS		WOODPECKERS	
Common Loon	W r	Semipalmated Plover	Мr	Yellow bellied Sapsucker	Мг
— Horned Grebe	W r	Kılldeer	Яc	Hairy Woodpecker	Wυ
Eared Grebe	Мu	Mountain Plover	Sc	Downy Woodpecker	W fc
Western Grebe	Ми	Common Snipe	Мu		
Pied billed Grebe	S u	Long billed Curlew	S u	FLYCATCHERS	
EGRETS HERONS		Whimbrel	Мr	Eastern Kingbird	Sε
	_	Upland Sandpiper	S r	Western Kingbird	Sc
Great Blue Heron	Su	Spotted Sandpiper	S fc	Cassin's Kingbird	Sι
Green Heron	S r	Solitary Sandpiper	M fc	Scissor tailed Flycatcher	S r
Black crowned Night Heron	Su	Willet	Мu	Ash throated Flycatcher	Sr
Yellow crowned Night Heron		Greater Yellowlegs	Мu	Say's Phoebe	Sc
Snowy Egret	Su	Lesser Yellowlegs	Мu	Willow Flycatcher	Sr
łBIS		Pectoral Sandpiper	Мu	Western Flycatcher	Мu
White faced lbis	M,r	Baird's Sandpiper	M fc	Western Wood Pewee	Sc
	*****	Least Sandpiper	M fc	Olive sided Flycatcher	Мr
DUCKS GEESE		Long billed Dowitcher	M fc	LADVC	
Canada Goose	Ru	Stilt Sandpiper	Мr	LARKS	
Snow Goose	M u	Semipalmated Sandpiper	M u	Horned Lark	Rа
Ross Goose	Μr	Western Sandpiper	Мu	SWALLOWS	
Mailard	Rс	Marbled Godwit	M fc		**
Gadwall	Ru	Hudsonian Godwit	Mr	Violet-green Swallow	Жu
Pintail	M fc	American Avocet	S fc	Tree Swallow	Mu
Green winged Teal	M u	Wilson's Phalarope	S fc	Bank Swallow	1, M
Blue-winged Teal	S fc	Northern Phalarope	M fc	Rough-winged Swallow	Su
Cinnamon Teal	S u	GULLS TERNS		Barn Swallow	Sc
American Wigeon	M u		C 60	Cliff Swallow	S fc
Northern Shoveler	Su	California Gull	S fc R c	Purple Martin	S r
Redhead	Su	Ring billed Gull		JAYS MAGPIES CROWS	
Ring-necked Duck	M,u	Franklin's Gull	Ma c	Blue Jay	Ru
Canvasback	Sr	Forster's Tern	Su	Biack-billed Magpie	Rc
Greater Scaup	Mr	Least Tern	12	Common Crow	R fc
Lesser Scaup	M fc	Black Tern	S fc	Piñon Jay	Mr
Common Goldeneye	M,u	CUCKOOS		Clark s Nutcracker	Wr
Bufflehead	Мu	Yellow billed Cuckoo	S u		
Ruddy Duck	Sr	2/2521/2 22/52		CHICKADEES, CREEPERS NUTHA	TCHES
Common Merganser	Wс	PIGEONS DOVES		Black-capped Chickadee	Rс
Red-breasted Merganser	Mr	Rock Dove	R c	Mountain Chickadee	Wu
VULTURES HAWKS EAGLES		Mourning Dave	S c	White breasted Nuthatch	Ru
		OWLS		Red breasted Nuthatch	Wи
Turkey Vulture	Sr		_	Brown Creeper	W,r
Goshawk	Мr	Barn Owl	Su	WRENS	
Sharp-shinned Hawk	Ru	Screech Owl	Ru		_
Cooper's Hawk	Ru	Great Horned Owl	R fc	House Wren	Sε
Red-tailed Hawk	R fc	Snowy Owl	W r	Rock Wren	M c
Red-tailed Hawk (Harlan s)	W r	Burrowing Owl	S fc	Bewick's Wren	Mu
Swainson's Hawk	Sc	Long eared Owl	Rr	MOCKINGBIRDS THRASHERS	
Rough-legged Hawk	W a	Short eared Owl	Ru	Mockingbird	S fc
Ferruginous Hawk	Rc	Saw whet Owl	Rr		5 ic 5,u
Golden Eagle	Rc	GOATSUCKERS NIGHTHAWKS, SW	UFTS	Gray Catbird Brown Thrasher	S,u S fc
Baid Eagle	Wr	Poorwill	S u		M c
Marsh Hawk	Rс	Common Nighthawk	Sc	Sage Thrasher	m L
Osprey	M r	White throated Swift	Su	KINGLETS THRUSHES	
Gyrtalcon	Wr			American Robin	S c
Prairie Falcon	R fc	HUMMINGBIRDS		Hermit Thrush	Мu
Peregrine Falcon	M r	Broad tailed Hummingbird	Su	Swainson's Thrush	M fc
Merlin	Wu	_	-	Veery	Mr
American Kestrel	Rc	KINGFISHERS		Eastern Bluebird	ת 2
QUAIL PHEASANTS		Beited Kingfisher	Ru		WuMa
Bobwhite	D	MUUDECKEBC		Townsend's Solitaire	Mu
Ring necked Pheasant	Ru	WOODPECKERS		Golden crowned Kinglet	Wu
	R fc	Common Flicker		Ruby crowned Kinglet	Mit
CRANES RAILS COOTS		(Yellow shafted)	Ru	•	1
Sandhill Crane	Мu	Common Flicker	-	PIPITS WAXWINGS	
Sora	S fc	(Red shafted)	Rc	Water Pipit	Жг
American Coot	Ric	Red headed Woodpecker	S fc	Sprague's Pipit	Mr
· · · · · · ·	** **	neo headed addabacket	J 10	Bohemian Waxwing	Wu
				Cedar Waxwing	. Rr
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